Bambanker™ - HRM

Made with Human Serum Albumin, no animal components (xeno-free)

Exclusively by Nippon Genetics

Cryopreservation, including freezing and thawing, is essential for cell culture technology. Cryopreservation of primate ES and iPS cells is very severe and difficult compared to murine or other cells. To address these problems, NIPPON GENETICS developed a new freezing medium (Bambanker™ HRM) containing Human Serum Albumin and DMSO for primate ES/iPS cells.

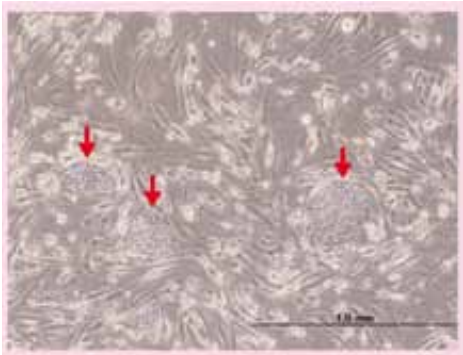
Manufactured according to a DMF

Bambanker™ HRM is manufactured according to a drug master file.

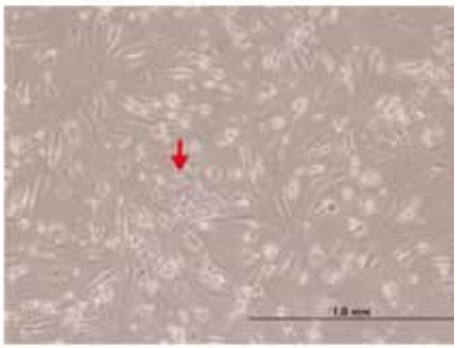
Bambanker™ HRM is xeno-free and chemically defined.

Ordering Information

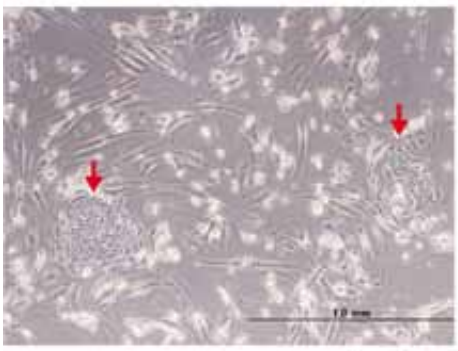
Cat.Nr.:	*Product*	*Content*
BBH01	Bambanker™ HRM	20 ml freezing media Bambanker™ - HRM
BBH02	Bambanker™ HRM	10 ml freezing media Bambanker™ - HRM



Cells cryopreserved with Bambanker hRM 4 days after thawing



Cells cryopreserved with 10 % DMSO containing medium 4 days after thawing



Cells cryopreserved with vitrification freezing preservation solution 4 days after thawing

Fig. 1:The experimental data shown here describe primate ES cells, cryopreserved in Bambanker™ HRM or 10 %. DMSO/culture medium by slow-freezing or in a conventional vitrification medium by quick-freezing, and then subsequent storage in liquid nitrogen. After 3 days, the cells were thawed by each adequate protocol, and then plated. These cryopreservation media were analysed by the number of alkaline phosphatase-positive colonies as recovery points. **The recovery points of Bambanker™ HRM directly from liquid nitrogen storage were twice higher than that of vitrification medium and four times than that of 10 % DMSO/culture medium.** The above described cryopreserved primate ES cells were put on dry ice 24h after three days in liquid nitrogen to mimic the dry ice transport, and then thawed and plated. The recovery percentage of Bambanker™ HRM remained high. Those of traditional vitrification were considerably lower. **These results indicate that Bambanker™ HRM provides efficient cryopreservation and dry ice transportation medium for primate ES/iPS cells.**

Application Note

NIPPON Genetics EUROPE

Customers product feedback

Product name: **Bambanker hRM (BBH01)**
Serum-free cryopreservation solution for regenerative medicine research

Application: Comparison of cryopreservation efficiency for the common marmoset fibroblast cells intended for the iPS cell induction

Data kindly provided by Primate Research Institute, University Kyoto, Molecular Physiological Research Department

Methods

Storage efficiency of Bambanker and two commercial preservative solutions (supplier T, supplier S) for fibroblasts from common Marmoset was compared. Fibroblast were cultured in a 6 cm petri dish till a confluency of 90-100%. Cells were passaged two times with Trypsin-EDTA (0.25%). After reaction stop cells were centrifuged at 800 rpm for 5 min. Each pellet was resuspended in 800 µl preservation solution and freezed at -80 °C in Bicell container (Nihon Freezer Co., Ltd.). After two months the cells were slowly thawed in a water bath and resuspended in 5 ml cell culture medium. Thereafter, the cells were centrifuged again (800 rpm, 5 min), the pellet resuspended in 3 ml culture cell medium and each culture seeded in 6 cm gelatine-coated dishes.

Cell preservation method

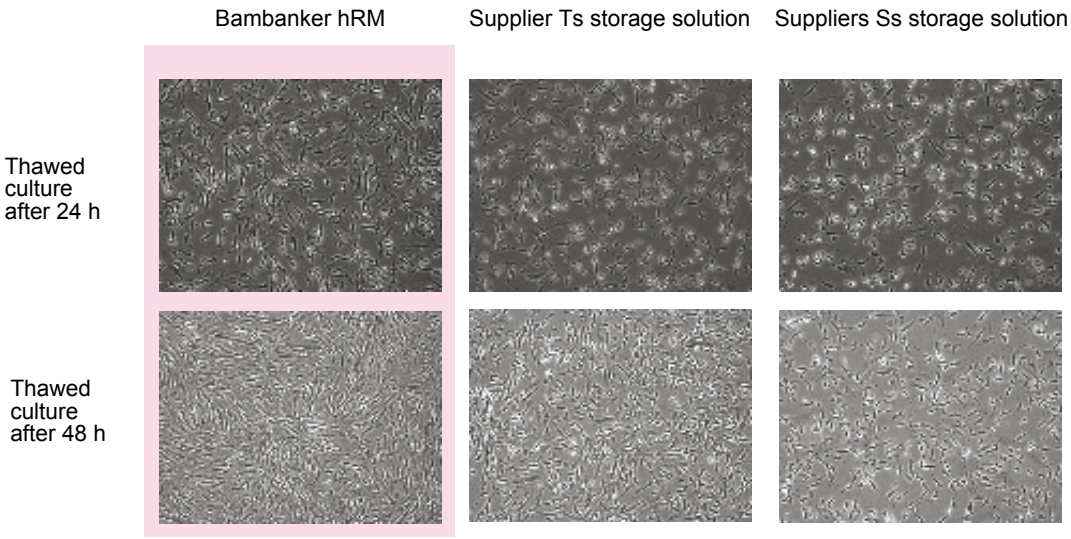
Preservation solution	Freezing method
Bambanker	Slow method
Suppliers Ts storage solution	Slow method
Suppliers Ss storage solution	Slow method

Slow method:

Freezing and storage of the samples at -80 °C.

Result

24 and 48 h after thawing photomicrographs were taken for every preservation solution.
The percentage of dead cells was determined. The highest survival rate was achieved with Bambanker, followed by Supplier Ts storage solution. Supplier Ss storage solution achieved the lowest survival rate. Only the cells which were stored with Bambanker showed a sufficient number so that they could be directly used for iPS cell induction.



Customers comment:
Bambanker hRM is a serum free freezing medium which can be very efficiently used for cryopreservation. Additionally Bambanker hRM is cheaper than the competitors solutions. Since the cryopreservation and also the iPS cell induction went really well, we will use in the future Bambanker hRM for our fibroblasts.

Nippon Genetics EUROPE GmbH
http://www.nippongenetics.eu
TEL +49 2421 554960 FAX +49 2421 5549611 info@nippongenetics.eu

LY2014JUL